AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1   1. (Currently amended) A method for enabling a database system to prove
2   that an origin system sent a message, comprising:
3   receiving the message and a signed first digest of the message at a
4   database system from the origin system, wherein the signed first digest was
5   created by signing a digest of the message using an origin private encryption key;
6   using an origin public encryption key that is associated with the origin
7   private encryption key to verify that the signed first digest was signed by the
8   origin system, thereby proving that the origin system created and sent the
9   message; and
10   persistently storing the signed first digest with the message, ~~thereby~~ which
11   ~~enabling~~ enables the database system to present the signed first digest as proof
12   that the origin system sent the message. thereby preventing the sender from
13   persuasively denying that the sender sent the message.

1   2. (Canceled).

1   3. (Previously presented) The method of claim 22, further comprising
2   passing the message and the digest through a plurality of queues between the
3   origin and the recipient, whereby the recipient and the origin are subscribers of
4   different queues.

1   4. (Original) The method of claim 3, further comprising passing the

2   message and the digest through a plurality of databases, wherein each database in

3   the plurality of databases includes at least one queue of the plurality of queues.

1   5. (Previously presented) The method of claim 1, wherein the origin public

2   encryption key and the origin private encryption key are a key pair of a public key

3   encryption system.

1   6. (Previously presented) The method of claim 22, wherein the recipient

2   public encryption key and the recipient private encryption key are a key pair of a

3   public key encryption system.

1   7. (Previously presented) The method of claim 1, wherein computing the

2   digest includes using one of message digest 2 (MD2), message digest 4 (MD4),

3   message digest 5 (MD5), secure hash algorithm (SHA), and secure hash algorithm

4   1 (SHA1).

1   8. (Currently amended) A computer-readable storage medium storing

2   instructions that when executed by a computer cause the computer to perform a

3   method for enabling a database system to prove that an origin system sent a

4   message, the method comprising:

5   receiving the message and a signed first digest of the message at a

6   database system from the origin system, wherein the signed first digest was

7   created by signing a digest of the message using an origin private encryption key;

8   using an origin public encryption key that is associated with the origin

9   private encryption key to verify that the signed first digest was signed by the

10 origin system, thereby proving that the origin system created and sent the

11 message; and

3

12 | persistently storing the signed first digest with the message, ~~thereby~~ which

13 | ~~enabling~~ enables the database system to present the signed first digest as proof

14 | that the origin system sent the message, thereby preventing the sender from

15 | persuasively denying that the sender sent the message.

1   9. (Canceled).

1   10. (Previously presented) The computer-readable storage medium of

2   claim 23, the method further comprising passing the message and the digest

3   through a plurality of queues between the origin and the recipient, whereby the

4   recipient and the origin are subscribers of different queues.

1   11. (Original) The computer-readable storage medium of claim 10, the

2   method further comprising passing the message and the digest through a plurality

3   of databases, wherein each database in the plurality of databases includes at least

4   one queue of the plurality of queues.

1   12. (Previously presented) The computer-readable storage medium of

2   claim 8, wherein the origin public encryption key and the origin private encryption

3   key are a key pair of a public key encryption system.

1   13. (Previously presented) The computer-readable storage medium of

2   claim 23, wherein the recipient public encryption key and the recipient private

3   encryption key are a key pair of a public key encryption system.

1   14. (Previously presented) The computer-readable storage medium of

2   claim 8, wherein computing the digest includes using one of message digest 2

3 (MD2), message digest 4 (MD4), message digest 5 (MD5), secure hash algorithm

4 (SHA), and secure hash algorithm 1 (SHA1).

1 15. (Currently amended) An apparatus for enabling a database system to

2 prove that an origin system sent a message, comprising:

3 a first receiving mechanism that is configured to receive the message and a

4 signed first digest of the message at a database system from the origin system,

5 wherein the signed first digest was created by signing a digest of the message

6 using an origin private encryption key;

7 a first verifying mechanism that is configured to use an origin public

8 encryption key that is associated with the origin private encryption key to verify

9 that the signed first digest was signed by the origin system, thereby proving that

10 the origin system created and sent the message; and

11 a first storing mechanism that is configured to persistently store the signed

12 first digest with the message, ~~thereby~~ which ~~enabling~~ enables the database system

13 to present the signed first digest as proof that the origin system sent the message,

14 thereby preventing the sender from persuasively denying that the sender sent the

15 message.

1 16. (Canceled).

1 17. (Previously presented) The apparatus of claim 24, further comprising a

2 passing mechanism that is configured to pass the message and the digest through a

3 plurality of queues between the origin and the recipient, whereby the recipient and

4 the origin are subscribers of different queues.

1 18. (Original) The apparatus of claim 17, wherein the passing mechanism

2 is further configured to pass the message and the digest through a plurality of

3   databases, wherein each database in the plurality of databases includes at least one

4   queue of the plurality of queues.

1   19. (Previously presented) The apparatus of claim 15, wherein the origin

2   public encryption key and the origin private encryption key are a key pair of a

3   public key encryption system.

1   20. (Previously presented) The apparatus of claim 24, wherein the

2   recipient public encryption key and the recipient private encryption key are a key

3   pair of a public key encryption system.

1   21. (Previously presented) The apparatus of claim 15, wherein computing

2   the digest includes using one of message digest 2 (MD2), message digest 4

3   (MD4), message digest 5 (MD5), secure hash algorithm (SHA), and secure hash

4   algorithm 1 (SHA1).

1   22. (Previously presented) The method of claim 1, further comprising:

2   receiving a signed receive-request from a recipient system for receiving

3   the message, wherein the receive-request is signed using a recipient private

4   encryption key;

5   validating the signed receive-request using a recipient public encryption

6   key that is associated with the recipient private encryption key;

7   sending a second digest of the message to the recipient system;

8   receiving a signed second digest from the recipient system, wherein the

9   signed second digest was created by signing the second digest using the recipient

10   private encryption key;

11   validating the signed second digest using the recipient public encryption

12   key, thereby proving that the recipient system requested to receive the message;

13   and

14   persistently storing the signed second digest, thereby enabling the database

15   system to present the signed second digest as proof that the recipient system

16   requested to receive the message.

1   23. (Previously presented) The computer-readable storage medium of

2   claim 8, the method further comprising:

3   receiving a signed receive-request from a recipient system for receiving

4   the message, wherein the receive-request is signed using a recipient private

5   encryption key;

6   validating the signed receive-request using a recipient public encryption

7   key that is associated with the recipient private encryption key;

8   sending a second digest of the message to the recipient system;

9   receiving a signed second digest from the recipient system, wherein the

10   signed second digest was created by signing the second digest using the recipient

11   private encryption key;

12   validating the signed second digest using the recipient public encryption

13   key, thereby proving that the recipient system requested to receive the message;

14   and

15   persistently storing the signed second digest, thereby enabling the database

16   system to present the signed second digest as proof that the recipient system

17   requested to receive the message.

1   24. (Previously presented) The apparatus of claim 15, further comprising:

2   a second receiving mechanism configured to receive a signed

3   receive-request from a recipient system for receiving the message, wherein the

4   receive-request is signed using a recipient private encryption key;

5   a second validating mechanism configured to validate the signed

6   receive-request using a recipient public encryption key that is associated with the

7   recipient private encryption key;

8   a second sending mechanism configured to send a second digest of the

9   message to the recipient system;

10   a third receiving mechanism configured to receive a signed second digest

11   from the recipient system, wherein the signed second digest was created by

12   signing the second digest using the recipient private encryption key;

13   a third validating mechanism configured to validate the signed second

14   digest using the recipient public encryption key, thereby proving that the recipient

15   system requested to receive the message; and

16   a second storing mechanism configured to persistently store the signed

17   second digest, thereby enabling the database system to present the signed second

18   digest as proof that the recipient system requested to receive the message.